Hanging Marble Run

Kit contains:

- 1 paper grocery bag
- 1 marble
- sheets of paper
- extra paper scraps

You will need: scissors, tape, a cup, a wall or door with a hook on it, and a broom or mop (the handle part).

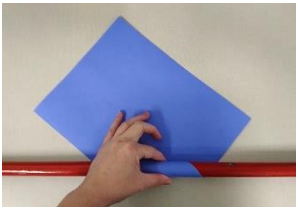
MORTON GROVE PUBLIC LIBRARY
6140 Lincoln Avenue, Morton Grove, IL 60053
Youth Info Desk: 847-929-5102 | mgpl.org

INSTRUCTIONS

Step 1. Find the perfect broom or mop handle for your project. You need one without a sticky-outy bit at the end. Many handles unscrew from their base, or the sticky-out bit pops off. Consult a grown-up if needed.

Step 2. Cut the FOLDED grocery bag along the lines through all of the layers. Unfold to get a big sheet of paper with handles on either end.

Step 3. Roll a sheet of paper around the broom/ mop handle as shown to create a tube. Tape to secure, then slide it off the handle. Repeat with the rest of your paper.

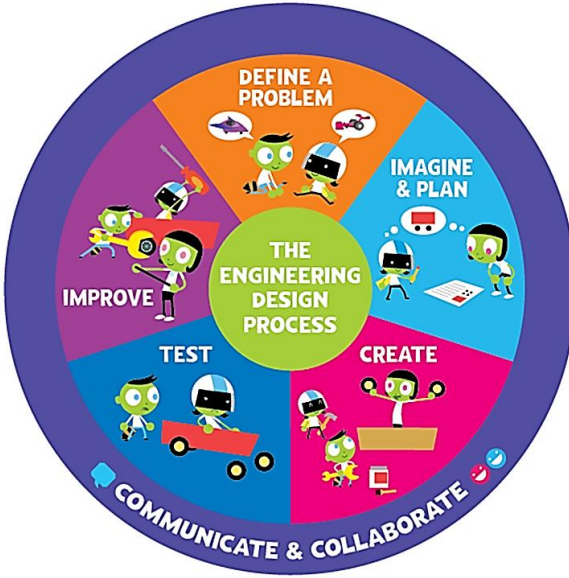


Step 4. Arrange your tubes on the grocery bag in a configuration that looks like the ultimate marble run. Tape in place.

Step 5. Test! Hang the grocery bag on a hook. Drop your marble into the top tube and watch it... probably fail. IT'S OKAY!!! This is all part of the **engineering design process**. Observe what works and what doesn't. Do you need to patch gaps? Re-align the tube openings? Move some or all of the tubes?

Step 6. Make the changes to your marble run. Test again! Does your marble make it through the entire series of tubes? If not, redesign and retest until it works.

Step 7. Place a cup below your finished device to catch the marble. For extra fun, flip your marble run upside down and hang from the other bag handle. Does it still work? Can you fix it?



Source: https://www.alaskapublic.org/education/ready-to-learn/ruff-ruffman/ruff-ruffman-virtual-events/